

The Weather Whisper

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Winter Driving in Iowa

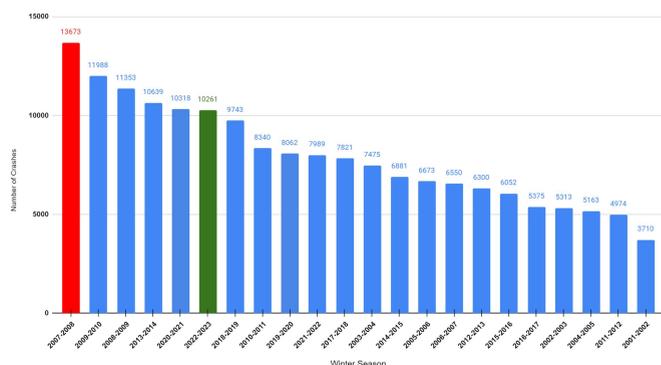
Roger Vachalek, Lead Meteorologist

It may be the most wonderful time of the year, but it's also the time of year when winter weather crashes peak across the state of Iowa. So far this 2023-2024 winter season has been relatively benign with little winter weather of note, but don't let your guard down yet because there's likely plenty of winter yet to track over Iowa in one form or another through at least March.

Over the past 22 seasons, we've had quite a variety of winter weather severity and with it quite a difference in the numbers of vehicle crashes due to winter weather across the state. Below is a graph of the past 22 winter seasons, beginning with fall 2001 and ending with last year in spring of 2023. The worst season in the past 22 has been 2007-2008 when over 13,500 crashes occurred. Last year (2022-2023) ranked 6th worst in the past 22 seasons with over 10,250 crashes. Notably, December of last year was a very rough month when a couple of storms combined with a prolonged period of strong winds from mid month through the Christmas holiday.

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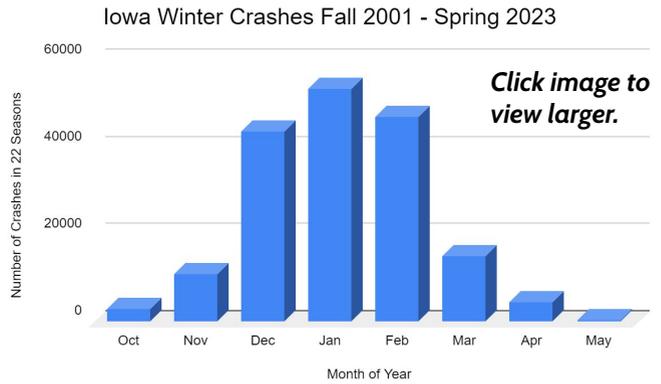
2001 - 2023 Winter Crashes - All of Iowa



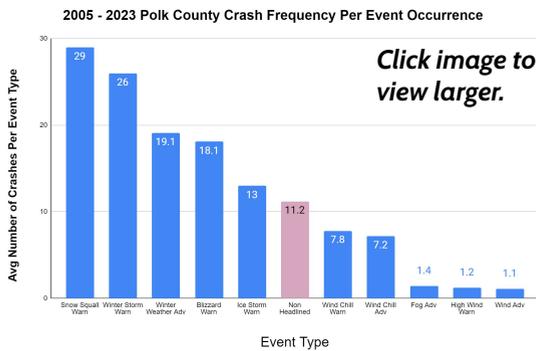
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At right is a monthly frequency of crashes across the state for the past 22 seasons. While a few early or late season systems have caused problems on roadways, the bulk of our winter travel problems occur from December through February when cumulative effects of snowfall, old snow on the ground, and strong winds cause both slick roads and visibility challenges for Iowa motorists.



Though travel can be difficult whenever winter weather hits, we all know from experience that higher travel periods increase risk of accidents, such as morning and afternoon rush hours and holiday travel traffic. We might think that all crashes occur during the biggest storms but the reality is that crashes can occur in all types of weather. Some of our worst events have been snow squalls; a brief burst of snow and blinding visibility that might vary from a few minutes to up to a hour.



The graph at left for Polk County shows that snow squalls are most likely to create travel problems. Normally, the worse the expected weather, the fewer travelers there are that venture out in the elements. Note in the graph that events of lesser impact, below warning or even advisory criteria, still create up to 11 crashes per event! Others like wind

chill advisories and warnings which usually follow big storms once the snow has stopped falling, also have crashes.

The combination of snow still on the road and blowing snow or icy roads due to extremely cold temperatures, prolong the period following a storm when crashes can occur. Bigger storms that produce more snowfall also tend to produce longer periods of poor road conditions; especially if temperatures fall near or below 10°F after the storm has ended. This is because road treatments, like salt, do not work as well in bitter cold temperatures and plows also have a more difficult time scraping ice and snow off the roads. The longer those poor road conditions persist, the more crashes can occur.

Preparing for winter weather travel can help keep you safe this winter season! Make sure your car is in good working order for winter weather, keep a winter safety kit in your car, and check the latest [National Weather Service forecast](#) and [Iowa DOT road conditions](#) prior to heading out. If you can, postpone travel during periods of impactful winter weather and wait until roads have improved. With this in mind, we can all have a safe and healthy travel season for the remainder of winter 2023-2024.

2023 Weather Year in Review

Brooke Hagenhoff, Lead Meteorologist

While 2023 has ended on a mild, and what one might call a “quiet” note, this doesn’t reflect the year as a whole. 2023 will go down in the record books.

January 2023 roared in with an ice storm impacting portions of northwest Iowa, and later that month central to northern Iowa saw over 10 inches of snow on the 18th. Between those two wintry events, the [2023 tornado season](#) had the earliest start of any season dating back to when tornado records began in 1950, when two tornadoes occurred in eastern Iowa on **January 16th**! By **February** southern Iowa picked up heavy snow, as Ottumwa measured 10 inches on **February 16th**. Another storm brought icy conditions to the Highway 30 corridor on **February 22-23rd** with heavy snow across northern Iowa.



Ice in Kelley, IA on February 23rd, 2023, photo courtesy of Joel Schroder.



Hail in Newton, IA on May 7th, 2023, photo courtesy of Danielle Rogers.

March was in like a lamb, but was most definitely out like a lion! On **March 26th** a narrow banded snow event occurred over central Iowa. Despite the band being only 35 miles wide, impacted areas reported 5-9” of snow from Crawford to Bremer counties! A few days later, **March 31st** brought a significant tornado outbreak to the state with [considerable impacts in eastern Iowa](#). This was followed up by another severe event on **April 4th**, [when hail up to baseball sized was reported in central Iowa with a tornado](#) tracking through Warren and Marion counties (see cover photo). This was followed by a quiet few weeks, but by **May** we were right back at it with a highly destructive hail storm across central Iowa on **May 7th** and over a dozen tornadoes on **May 13th**.

The summer began active with several severe events impacting the area. In **June** the most notable storms included a large hail event on **June 24th** with hail up to 3” in diameter and back-to-back straight-line wind storms on **June 29th** and **30th**. **July** followed with an array of severe storms, often occurring in the morning hours, such as

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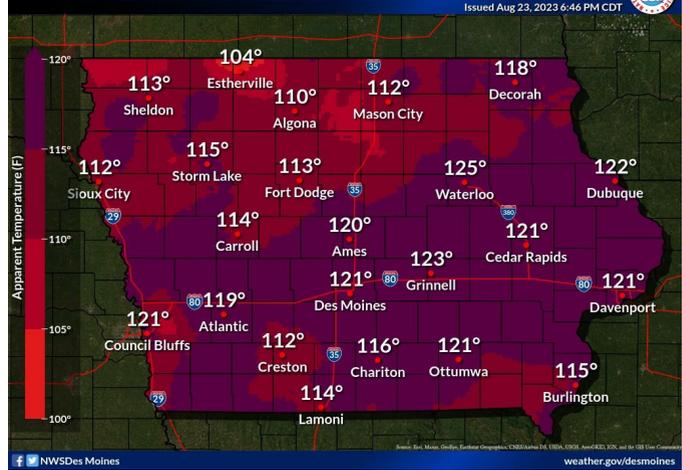
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those on the mornings of **July 12th, 17th, and 26th**. A few tornadoes occurred on **August 5th** in west-central Iowa. After this, the storms tapered off and the heat settled in. From **August 19-25th** most of the state saw the afternoon heat index soar over 100-110+° each afternoon. Whew!

Fall slipped into a quiet pattern and steep precipitation deficits that existed throughout the year continued to build through **September, October, and November**, worsening the [drought](#) that has spread across all of Iowa, putting rivers at record low stages and endangering drinking water for some communities. It wasn't totally quiet, however, as **October 13th** brought a line of thunderstorms with a few very weak tornadoes. And **December**? The month that usually signals a marked shift to winter in Iowa saw [record breaking warmth](#) and a tendency for rain, not snow.

Maximum Heat Index Values Today

Weather Forecast Office
Des Moines, Iowa
Issued Aug 23, 2023 6:46 PM CDT



Peak heat index across IA on the afternoon of August 23rd, 2023



STAFF SPOTLIGHT

Jessica Tweedt

Project Management, Administration, Tour Coordinator

Background

Jessica grew up right here in Iowa, Ankeny to be exact. Once she graduated from high school, she joined the Marine Corps and served for 5 years. After being away for 7 years, she decided that it was time to come home, and moved back in April 2020. In June 2020 she started at NWS Des Moines and has been here ever since. Little over 1 month from her starting date, Jessica found herself at the center of the August 2020 Derecho answering and managing calls. Since then, she jumps at the opportunity to assist in all other areas.

Outside of the office, Jessica can be found at one of many extracurricular activities her daughter participates in. She recently graduated with her Masters in Business Administration with a concentration in Project Management. Whenever she has some free time, she enjoys reading, baking, crafting, and spending time with friends and family.



Administrative
Support Assistant



3 Years of service

On the Cover:

Looking north from the Melcher-Dallas area towards the tornado warned storm in western Marion County on April 4, 2023. Read more about this event [here](#). Photo by Jesse Castillo.



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